

# WUE Comprehensive Review

## Urban Conservation Projections

*Presentation To*  
Water Plan Update Advisory Committee  
August 17, 2005

# Presentation Overview

- Objective, Scope, and Uses
- Projection Levels
- Methods and Data
- Analysis Results
- Conclusions

# Objective of Urban Analysis

- Bracket expected range of urban water savings, given:
  - Existing and expected code requirements
  - Existing BMPs
  - Other proven conservation measures
  - With/Without MOU Certification
  - Alternative levels of state/federal investment consistent with ROD and state/federal fiscal constraints

# What It Doesn't Do

- Estimate maximum savings potential given all possible current and future water savings measures.
- Seek the “socially optimal” level of urban conservation.

# Scope of Analysis

- Timeframe: 2000 - 2030
- Geographic Unit: Hydrologic Region
- Conservation Measures: Existing BMPs and Other “Proven” Measures
  - Given timeframe this provides conservative estimate of water savings potential
- MOU Certification: With and Without
- State/Federal Funding: 3 Levels

# Uses of Urban Analysis

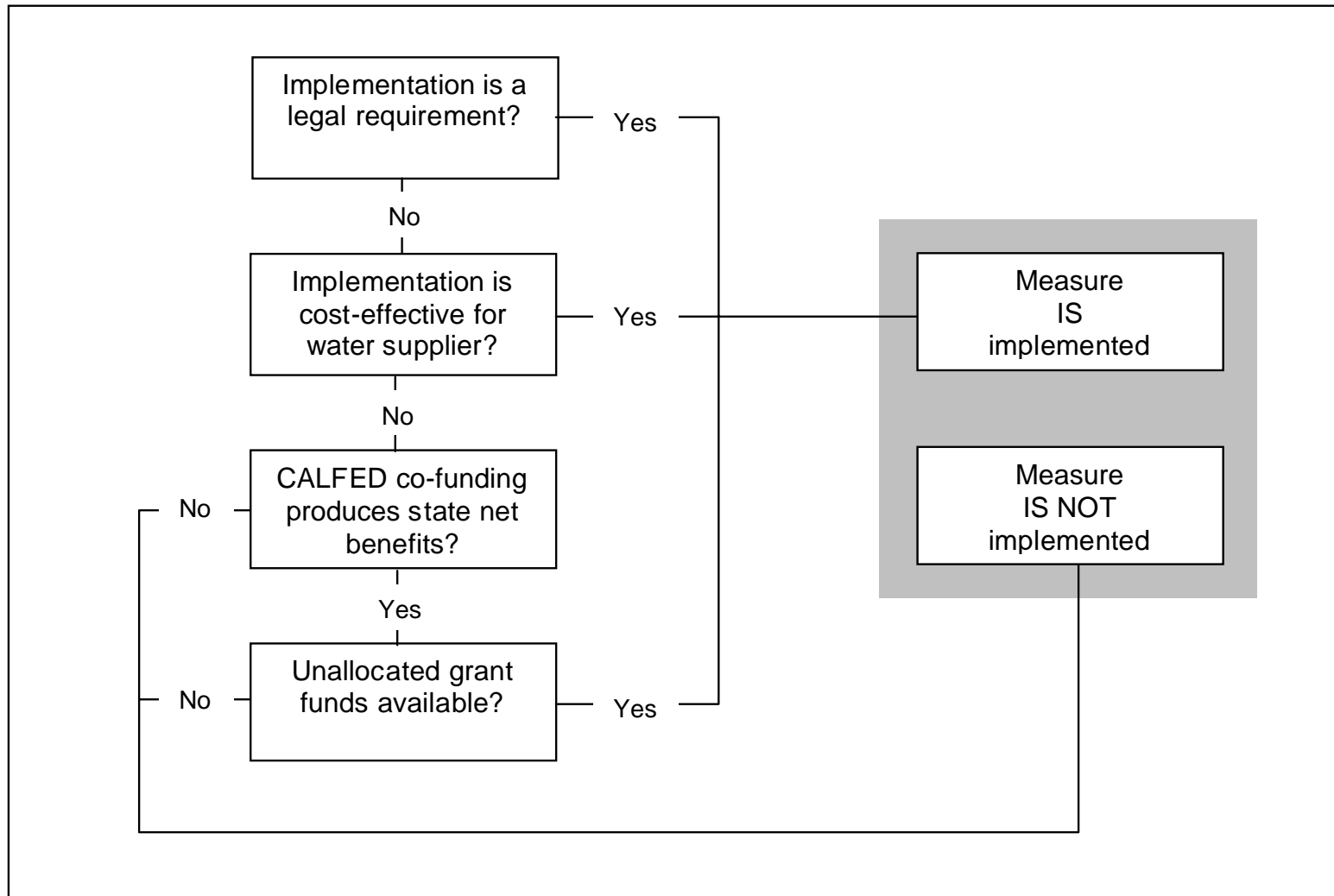
- Guide WUE Program Implementation
  - Program focus
  - Level of investment
- Surface Storage Investigations  
(Common Assumptions)
- State Water Plan Updates

# Urban Conservation Measures Evaluated (Refer to Handout)

Criteria for Inclusion:

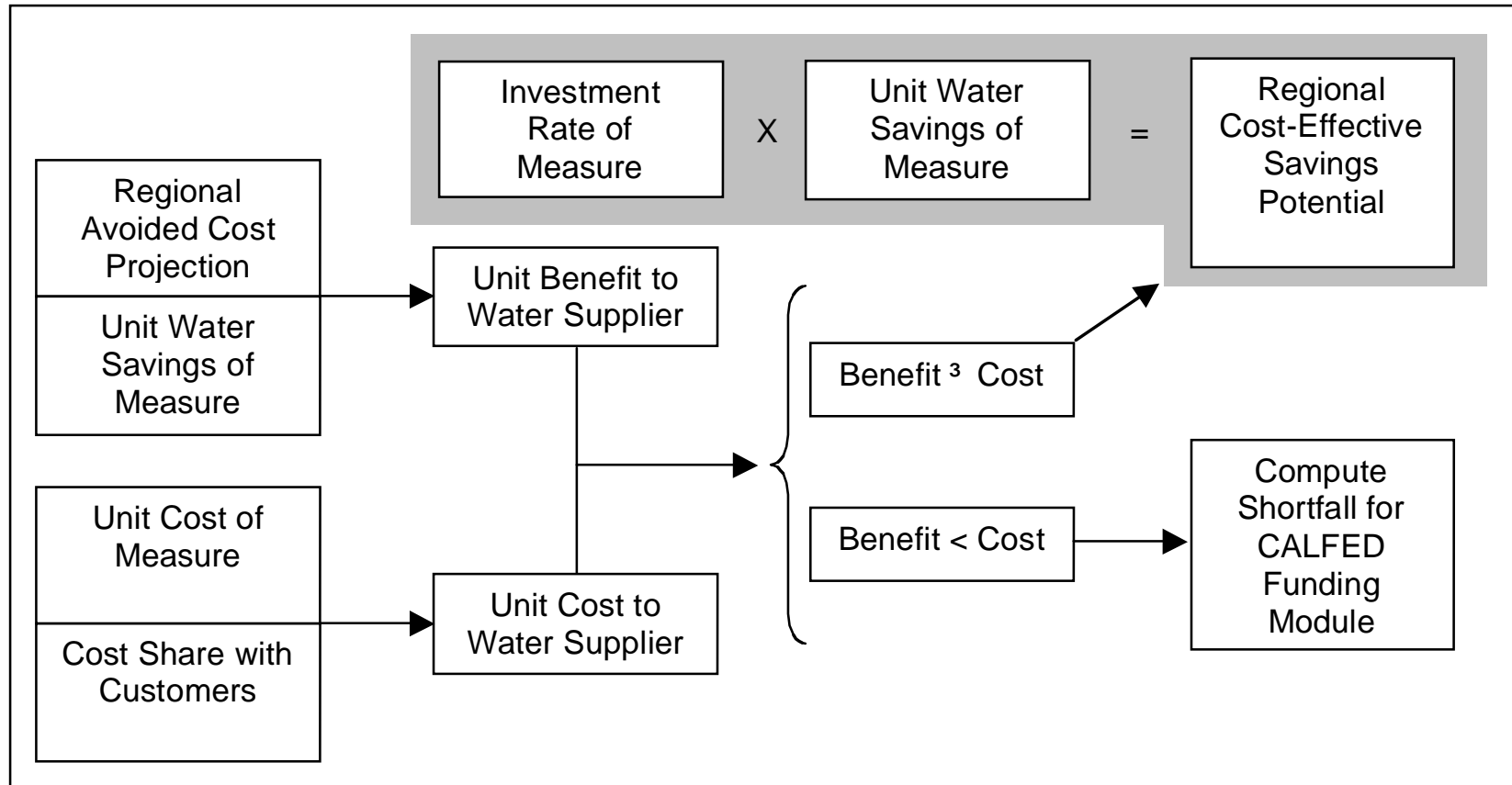
1. BMP with quantifiable coverage and savings
2. Non BMP with history of implementation and quantifiable savings

# Implementation Criteria

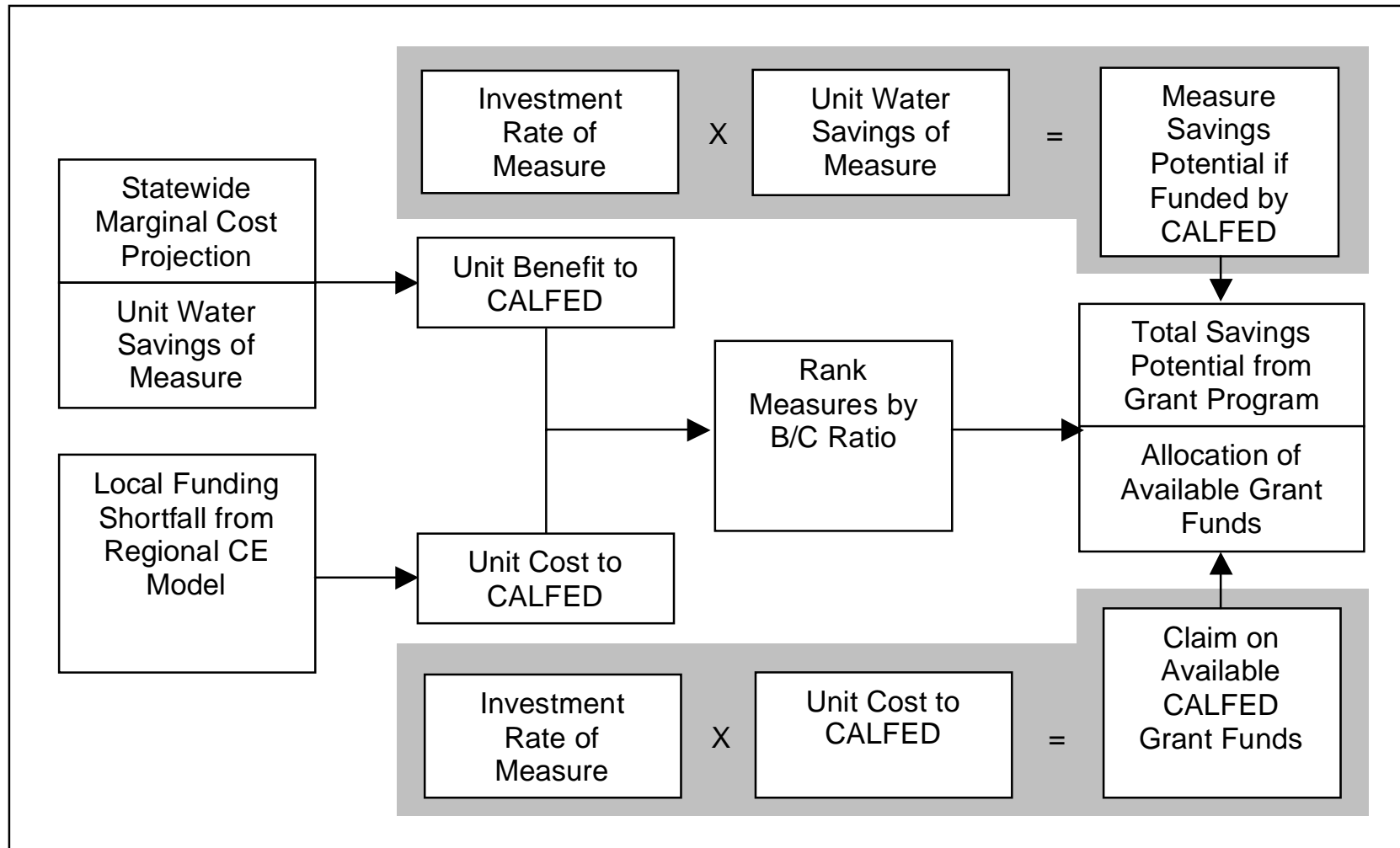




# Local CE Model Structure



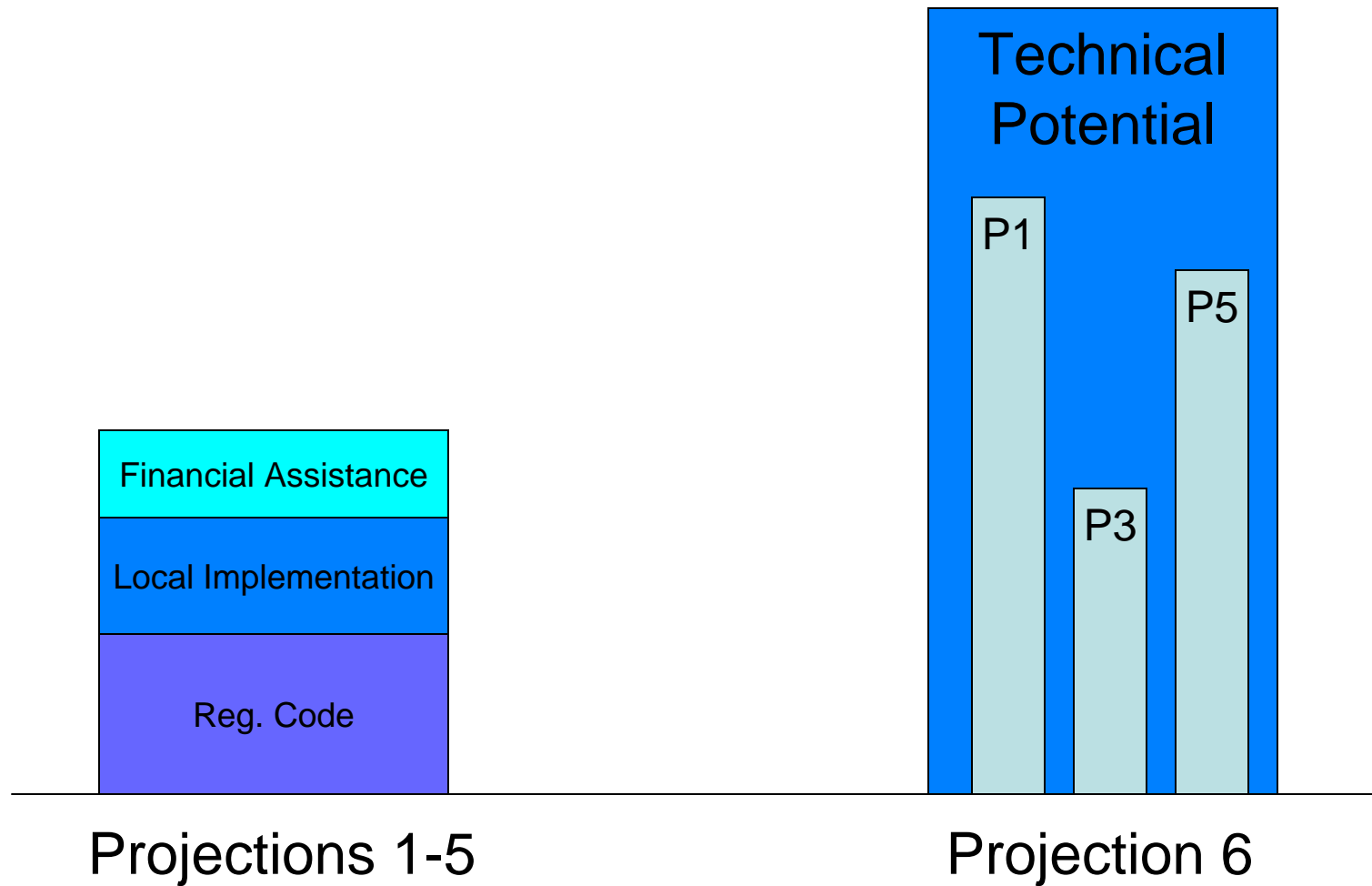
# Grant Model Structure



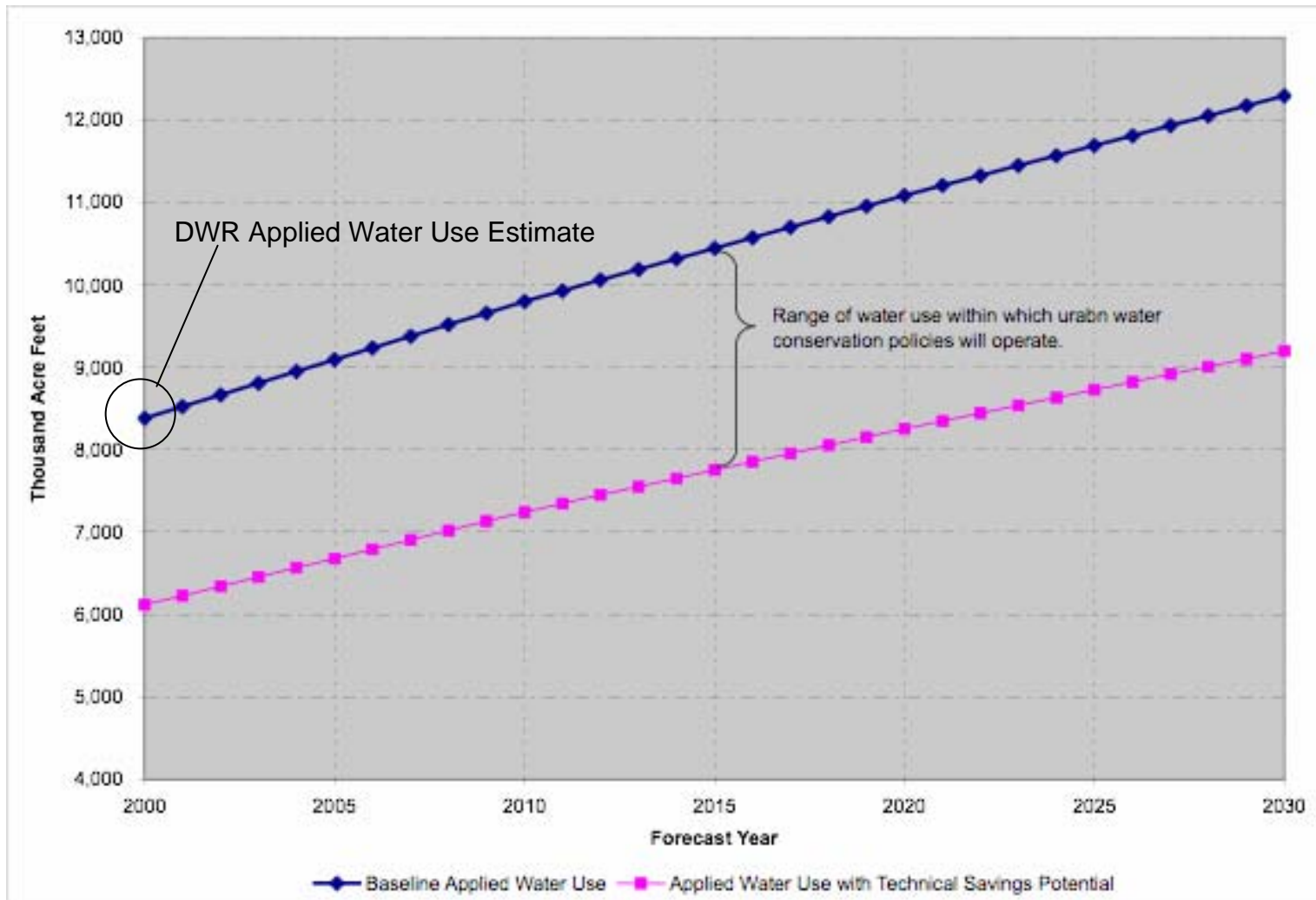
# Six Urban Projections

Projection	State/Federal Funding Assumption
<b>1. Reasonably Foreseeable:</b> Regulatory code-induced conservation plus continuation of historic rate of investment in Urban BMPs plus investment of remaining Prop. 50 funds.	Limited to remaining Proposition 50 funds (grant funding level 1). Analysis assumes funds fully awarded by 2006.
<b>2. Locally Cost-Effective Practices:</b> Regulatory code-induced conservation plus full implementation of locally cost-effective practices; state/federal investment in projects that are not locally cost-effective but do have statewide positive net benefits.	Limited to remaining Proposition 50 funds (grant funding level 1). Analysis assumes funds fully awarded by 2006.
<b>3. Moderate CALFED Investment:</b> Same as Reasonably Foreseeable but state/federal funding increased and extended to 2030	\$15 million/yr through 2030 (grant funding level 2).
<b>4. Locally Cost-Effective Practices w/ Moderate CALFED Investment:</b> Same as Locally Cost-Effective but state/federal funding increased and extended to 2030	\$15 million/yr through 2030 (grant funding level 2).
<b>5. Locally Cost-Effective Practices w/ ROD Funding Levels:</b> Same as Locally Cost-Effective but state/federal funding increased and extended to 2030	\$40 million/yr for first 10 years; \$10 million/yr thereafter (grant funding level 3).
<b>6. Technical Potential:</b> 100% adoption of urban conservation measures included in analysis. Funding is not a constraint to implementation. This projection provides the upper limit of water savings for modeled conservation measures and serves as a point of reference for the other projections.	Not Applicable

# Composition of Water Savings



# Band of Savings Potential



# Efficiency Code Savings

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TIFF (LZW) decompressor  
are needed to see this picture.

# BMPs: Past as Prologue

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# BMPs: Locally Cost-Effective

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# Urban Projections

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# 2030 Urban Savings Projections

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# % of Technical Potential

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# Per Capita Water Use

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# 2030 Urban Water Use By Projection

Year 2000 Urban Use	8.38 MAF
Comprehensive Review Projections	2030 Urban Water Use (MAF)
Baseline	12.30
1	11.14
2	10.43
3	10.90
4	10.19
5	10.22
Tech. Potential	9.20

# Annual Investment Cost

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# Unit Cost of Water Savings

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# Some Conclusions

- Urban use projected to increase 33% between 2000 and 2030 under a “status quo” policy (Proj. 1) - about 2.8 MAF
- Aggressive implementation of locally cost-effective measures could reduce “status quo” use by an additional 0.7 MAF (Proj. 2)



# Some More Conclusions

- Policies solely emphasizing financial assistance (Proj. 3) reduce water use less than policies emphasizing local implementation of cost-effective measures (Proj. 2)
- Proj. 2 savings are 0.5 MAF greater than Proj. 3 savings

# Yet More Conclusions

- Coupling financial assistance with policies that push implementation of locally cost-effective measures (Proj. 4 & 5) have the greatest impact on urban use
- Savings under Projections 4 & 5 are roughly 1 MAF greater than under Projection 1 (“status quo”)

# Questions

- When can I get the report?
- Will there be a review and comment period?
- Can I get a copy of the model?
- Will I be able to run the model?

And now your other questions ...